

REMARKS

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are currently pending in the application.

This amendment is in response to the Office Action of January 22, 2008.

35 U.S.C. § 112 Claim Rejections

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

During examination the USPTO must give claims their broadest reasonable interpretation in light of the specification. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 70 USPQ2d 1827 (Fed. Cir. 2004) This means that the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. *In re Zletz*, 893 F.2d 319, 13 USPQ2d 1320 (Fed. Cir. 1989) *Chef Amernica Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 69 USPQ2d 1857 (Fed. Cir. 2004) The ordinary and customary meaning of a claim term is the meaning the that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective date of the patent application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 74 USPQ2d 1321 (Fed. Cir. 2005). (*enbanc*); *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 67 USPQ2d 1438 (Fed. Cir. 2003); *Brookhill-Wilk I, LLC v. Intuitive Surgical, Inc.* 334 F.3d 1294, 67 USPQ2d 1132 (Fe. Cir. 2003) In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art. It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims. *Fergusson Beauregard/Logic Controls v. Mega Systems*, 350 F.3d 1327, 69 USPQ2D 1001 (Fed. Cir. 2003) MPEP § 2111, MPEP § 2111.01

Applicants assert that the word “property” has the ordinary, simple, customary meaning of the word “property” as set forth in Webster’s Ninth New Collegiate Dictionary, page 943, and as used in the Applicants specification, numbered paragraphs [0015] through [0018] and [0028] through [0054]. A copy of the ordinary, simple, customary meaning of the word “property” as set forth on page 943 of Webster’s Ninth New Collegiate Dictionary is attached to this amendment as Attachment A for the Examiner’s reference.

Applicants assert that independent claims 1, 9, and 17 clearly set forth the scope of the “properties” of the first adhesive layer and the second adhesive layer.

In independent claim 1, Applicants assert that the multilayer adhesive includes a first outermost adhesive layer having “properties” of a “first outermost adhesive layer are set forth as “the a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components having properties of a first type, the electromagnetic radiation-curable components having properties of a first type comprising a first outermost adhesive layer providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device forming a mark on the semiconductor device by the electromagnetic radiation- curable components curing and remaining on the semiconductor device when a laser marks a semiconductor device” while the “properties” of the second adhesive layer are set forth as “a second adhesive layer separate from the first outermost adhesive layer having second properties different than the properties of the first type of the first outermost adhesive layer disposed between the tape and the first outermost adhesive layer, the second adhesive layer having second properties comprising a second adhesive layer of a mixture of electromagnetic radiation-curable components upon exposing to radiation the second adhesive layer facilitating peeling of a flexible film material when laser marking a semiconductor device”.

In independent claim 9, Applicants assert that the multilayer adhesive including a first outermost adhesive layer having “properties” of “a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components having properties of a first type comprising a first outermost adhesive layer providing a mark on a laser-markable surface upon exposure thereof to electromagnetic radiation by curing and bonding to at least a portion of a semiconductor device by the electromagnetic radiation- curable components curing and

remaining on the semiconductor device when a laser marks a semiconductor device” while the properties of the a second adhesive layer are set for the as a “second adhesive layer separate from the first outermost adhesive layer having second properties different than the properties of the first type of the first outermost adhesive layer disposed between the film material and the first outermost adhesive layer, the second adhesive layer having second properties comprising a second adhesive layer of a mixture of electromagnetic radiation-curable components upon exposing to radiation the second adhesive layer solely facilitating peeling of a flexible film material when laser marking a semiconductor device”.

In independent claim 17, Applicants assert that the at least two layers of adhesive including a first outermost adhesive layer having “properties” of “a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components having properties of a first type comprising a first outermost adhesive layer providing a mark on a surface upon exposure thereof to electromagnetic radiation by curing and bonding to at least a portion of a semiconductor device, the radiation-curable components forming the mark by curing and bonding to a surface of the semiconductor device when a laser marks a semiconductor device” while the second adhesive layer has “properties” of a “a second adhesive layer separate from the first outermost adhesive layer having second properties different than the properties of the first type of the first outermost adhesive layer disposed between the film material and the first outermost adhesive layer, the second adhesive layer having second properties comprising a second adhesive layer of a mixture of electromagnetic radiation-curable components upon exposing to radiation the second adhesive layer solely facilitating peeling of a flexible film material when laser marking a semiconductor device”.

Applicants assert that Applicant asserts that, at least, specification paragraphs numbered [0041] and [0049] clearly supports the claim limitation of presently amended independent claims 1, 9, and 17 calling for “first mixture layer is formed of a type so as to cure and bond to a surface of a bare semiconductor die 20 upon exposure to a radiation source, whereupon it is laser markable” and “[u]pon exposure to radiation, the second adhesive layer can either cure onto the first mixture layer or, alternatively, lose its adhesive properties and facilitate peeling of carrier tape 4 from a wafer or surface of a bare semiconductor die 20”.

Applicants assert that when the words of independent claims 1, 9, and 17 are given their ordinary, simple, customary meanings, there is nothing vague and indefinite about such claim terminology under 35 U.S.C. § 112, second paragraph. Further, Applicants assert that the ordinary, simple, customary meanings of the word “property” does not require a “chemical” definition of any different “properties” of the either the first outermost adhesive layer or the second adhesive layer. Applicants assert that both the claim language of the claimed inventions of independent claims 1, 9, and 17 and the specification of such claim language is definite under 35 U.S.C. § 112.

Therefore, presently amended claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22, AND 24 are allowable under the provisions of 35 U.S.C. § 112.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Weng et al. (U.S. Patent 5,972,234) in view of Ishiwata et al. (U.S. Patent 5,300,172)

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Weng et al. (U.S. Patent No. 5,972,234) in view of Ishiwata et al. (U.S. Patent No. 5,300,172). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants further submit that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants’ disclosure.

To establish a *prima facie* case of obviousness the prior art reference (or references when combined) **must teach or suggest all the claim limitations**. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also* MPEP § 2143.03. Additionally, the Examiner must determine whether

there is “an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-1741, 167 L.Ed.2d 705, 75 USLW 4289, 82 U.S.P.Q.2d 1385 (2007). Further, rejections on obviousness grounds “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id* at 1741, quoting *In re Kahn*, 441, F.3d 977, 988 (Fed. Cir. 2006). Finally, to establish a *prima facie* case of obviousness there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Furthermore, the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Applicant’s disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367.

Turning to the cited prior art, Weng et al. teaches or suggests a method for marking a semiconductor surface. Weng et al. describe a polymeric tape can be provided that is suitable for ablative photodecomposition. Column 4 lines 25-40. In other words, the mark which is to be formed in the semiconductor surface is first formed as a cavity through the tape using “high-intensity energy beams such as ultraviolet light or laser.” Column 4 lines 32-33; *See also* column 2 lines 63-63, column 3 lines 6-11, column 3 lines 22-23, column 3 lines 27-30, column 3 lines 39-40, column 4 lines 52-54. After the mark has been formed *through* the tape, the tape is applied to the semiconductor surface. Column 4 line 57 – column 5 line 7. Finally, the mark is formed in the semiconductor surface by etching the semiconductor in the area exposed by the mark formed in the tape. The tape protects the rest of the semiconductor surface from the etchant, such that the mark in the tape is patterned into the semiconductor surface. Column 5 lines 8-25. Finally, the tape is removed from the surface of the semiconductor, leaving the mark formed by the etchant. Column 5 lines 27 – 37. The tape has a thickness of about 0.5 mm and can be provided with an adhesive backing or without an adhesive backing. Column 5, lines 38-41. A suitable adhesive may be an acrylic type polymer. Column 4, lines 63,64. Weng et al. does not teach or suggest forming a mark on a semiconductor surface using an ultraviolet light or

laser to cause adhesive of the tape to cure and bond to the semiconductor surface forming a mark thereon as only an etching process forms a mark on the semiconductor surface.

The Ishiwata et al. reference teaches or suggests the use of a radiation curable adhesive tape on a wafer to form a three dimensional network.

Applicants assert that any combination of the Weng et al. reference in view of the Ishiwata et al. reference fails to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1, 9, and 17 because cited prior art fails to teach or suggest all the claim limitations and the suggestion to make the claimed combination and the reasonable expectation of success is found solely in Applicants' disclosure, not the cited prior art.

Applicants assert that any combination of the cited prior art does not and cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of independent claims 1, 9, and 17 because any such combination of the cited prior art fails to teach or suggest all the claim limitations of the claimed inventions.

Applicants assert that the ordinary, simple, customary meaning of the words of the claims must be used to interpret the claimed inventions. Applicants assert that the ordinary, simple, customary meaning of such words cannot be changed to an unordinary, unusual, unused meaning of the words in any rejection without a showing that such is used by one of ordinary skill in the art.

Applicants note that the Office Action states that "Weng lacks teaching that the marking tape comprises 1) a material having a thermal expansion coefficient substantially similar to the semiconductor device, 2) two different adhesive layers, and 3) the first outermost adhesive layer is radiation curable and bonded to at least a portion of a semiconductor device." Applicants further note that the Office Action asserts that "... since Weng teaches a marking tape having substantially the same structure [but not the same] and composition for the same use as the instant invention, selecting a workable material having a similar thermal expansion coefficient substantially similar to the semiconductor device is deemed to be an obvious routine optimization, dictated by the same use conditions."

However, there is no showing in the cited prior art in the application to support any such statements by one of ordinary skill in the art under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 as Applicants assert that such statements are “mere conclusory statements without some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”

Further, Applicants assert that there is no mandatory requirement under 35 U.S.C. § 103 that the first outermost adhesive layer and the second adhesive layer be claimed using chemical equations and structure and can only be claimed by using chemical equations and structure to show specific chemistry variations in the first outermost adhesive layer and the second adhesive layer so that they are distinguished from each other as they are distinguished from each other, rather than being distinguished from each other by the “properties” set forth in the claimed inventions of independent claims 1, 9, and 17. Applicants assert that there has been and can be no showing that the chemical structure of the first outermost adhesive layer and the second adhesive layer must be set forth in the claimed inventions of independent claims 1, 9, and 17 under either 35 U.S.C. § 102 or 35 U.S.C. § 103 to distinguish over cited prior art when the “properties” of such layers distinguish over the cited prior art. Applicants can find no basis in 35 U.S.C. or 37 CFR or the MPEP for any requirement of using chemical equations and structure solely to distinguish over cited prior art.

While the Office Action takes the position that “a single thicker adhesive layer would clearly read on the disclosed chemistry between the two layers”, Applicants disagree with such an assertion as there has been no showing as such and Applicants assert that such a statement clearly does not comply with the different ordinary, simple, customary meaning of the word “property” or “properties” of the first outermost adhesive layer and the second adhesive layer set forth in independent claims 1, 9, and 17 which clearly distinguish between the properties of the adhesives and clearly require that two layers of adhesive be present, not a single layer. While the Office Action states that the “examiner takes the position that since Weng’s single-layer adhesive provides the same structural features at its outer surfaces and the recitation lacks any distinct chemistry

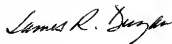
between the two adhesive layers, Weng's single layered adhesive marking tape reads on the two adhesive layers of the claimed invention", Applicants assert that there has been no showing that one of ordinary skill in the art would take such a position and such statement is merely a conclusory statement without some articulated reasoning with some rational underpinning for support from the cited prior art.

Further, Applicants assert that since the cited prior art fails to teach or suggest the claim limitations of the claimed inventions of independent claims 1, 9, and 17 and since there has been no showing that one of ordinary skill in the art based on the cited prior art would consider the claim limitations to be obvious based on any teachings of any prior art, the rejection of claimed 1, 3, 4, 6, 8, 9, 1,, 12, 14, 16, 17, 19, 20, 22, and 24 based on any combination of the Weng et al. reference in view of the Ishiwata et al. reference is a hindsight reconstruction of the claimed inventions base solely upon Applicants' disclosure which is *impermissible*. Applicants note that the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Applicant's disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Applicants assert that there has been no such showing. Additionally, underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367. Applicants assert that all and any hindsight is prohibited and cannot be used regarding any rejection under 35 U.S.C. § 103 as the *KSR* decision clearly overrules the earlier *In re McLaughlin* case. Applicants assert that there has been no showing of success for any combination of the Weng et al. reference in view of the Ishiwata et al. reference whatsoever. Applicants further assert that there is no reason set forth to modify the Weng et al. reference in view of the Ishiwata et al. reference, other than Applicants disclosure. Applicants further assert that since neither the Weng et al. reference nor the Ishiwata et al. reference nor any combination of the Weng et al. reference in view of the Ishiwata et al. reference teaches or suggests all the claim limitations of independent claims 1, 9, and 17, such claims are rejected based solely on hindsight based solely on Applicants disclosure which is *impermissible*.

Therefore, claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22, and 24 are allowable.

Applicants request the allowance of claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22, and 24 and the case passed for issue.

Respectfully submitted,



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ATTACHMENT A



WEBSTER'S Ninth New Collegiate Dictionary

A Merriam-Webster®

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